

PANEL DISCUSSION: SAVANNAH HARBOR DEEPENING PROJECT

Judy Jennings¹, Sam Drake², Keith Parsons³, David Kyler⁴ and Tom Meronek⁵

AUTHORS: ¹Chair, Coastal Georgia chapter of the Sierra Club, Savannah, Georgia; ²Refuge Manager, Savannah Coastal Refuges, 1000 Business Center Drive, Parkway Business Center, Suite 10, Savannah, Georgia 31405; ³Georgia Department of Natural Resources, Environmental Protection Division, 205 Butler Street, SE, East Floyd Tower, Atlanta, Georgia 30334; ⁴Executive Director, Coastal Georgia Center for Sustainable Development, P.O. Box 598, Darien, Georgia 31305; and ⁵Georgia Department of Natural Resources, Fisheries Section, 22814 Hwy. 144, Richmond Hill, Georgia 31324.

REFERENCE: *Proceedings of the 1999 Georgia Water Resources Conference*, held March 30-31, 1999, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, University of Georgia, Athens, Georgia.

PANELISTS AND THEIR STATEMENTS:

Georgia Ports Authority: Proposal to Deepen Savannah Harbor from 42' to 48'.

Mr. Bo Ellis and Dr. Steve Peene of Applied Technology and Management will represent Georgia Ports Authority.

U.S. Fish and Wildlife Service - Views on the Harbor Project's Effects.

Sam O. Drake, Jr., Refuge Manager, Savannah Coastal Refuges, 1000 Business Center Drive, Parkway Business Center, Suite 10, Savannah, GA 31405; tel: 912-652-4415 ext. 101.

The Fish and Wildlife Service has experienced many changes in water quality and quantity at Savannah National Wildlife Refuge since its establishment in 1927. Unfortunately, not all of these have had positive benefits on fish and wildlife resources. However, some of the past mistakes have or are in the process of being rectified. Others, such as the upstream reservoirs, benday cuts for barge traffic, increased demands for Savannah River surface waters for municipal and industrial and industrial water supplies, and a deeper shipping channel for the Savannah Harbor will be will us for many more years.

Most recently, the refuge staff has expended considerable time and effort evaluating the Georgia Ports Authority's proposal to deepen the shipping channel from 42 to 48 feet. Based on scientific studies conducted for the project's Environmental Impact Statement (IS), the previous deepening in 1994 allowed saltwater intrusion back into refuge freshwater marshes that were being restored following taking the tidewater structure on Back River out of operation in 1991. We currently oppose the deepening project because of anticipated adverse impacts to striped bass, shortness sturgeon, and freshwater tidal marshes based on salinity and dissolved oxygen model runs for an 8-foot deepening contained in the IS. If this project

is consistent with previous models used to project impacts for other projects, it will underestimate the adverse impacts despite the sponsors considerable efforts to present a worse case scenario. There are numerous significant issues to discuss in this scenario.

Economic Impacts of the Project on Fisheries and Tourism in Chatham County.

David Kyler, Executive Director, Coastal Georgia Center for Sustainable Development, PO Box 598, Darien, Georgia 31305; tel: 912-638-4434.

Of the many adverse effects expected from further deepening of the Savannah harbor and channel, there has been very comment about the economic consequences for existing businesses which depend on the productivity and diversity of the river's ecosystem. Although detailed information is not available, it appears that even if the project causes only relatively marginal reductions in activities such as commercial and recreational fishing, as well as nature-based tourism, the economic effects could be substantial enough to outweigh long-term benefits attributed to the harbor deepening (either alone or when combined with other adverse impacts). There are similar implications for the effects of expanded maintenance activities that would be required by the project, which have also received very little attention in analysis of the project to date.

Georgia EPD's Section 401 Evaluation of the Harbor Deepening Proposal.

Keith Parsons, Georgia Department of Natural Resources, Environmental Protection Division, 205 Butler Street, S.E., East Floyd Tower, Atlanta, GA 30334; tel: 404-657-9487.

The Georgia Department of Natural Resources (DNR), Environmental Protection Division has a mandated responsibility to review all applications submitted to the U.S. Army Corps of Engineers for activities within the State

of Georgia which have a probability to adversely impact water quality. This mandate is given to Georgia under Section 401 of the Federal Clean Water Act.

The Georgia Ports Authority presently has a proposal to deepen the shipping channel within Savannah River Harbor from the existing depth of 42 feet to a new operating depth of up to 48 feet mean low water. Early studies have indicated that increased levels of salinity, decreased dissolved oxygen concentrations, alteration in hydrodynamic regimes, and potential impacts to fisheries and freshwater tidal marshes are problematical in regards to moving this proposal forward. The Georgia EPD plays a critical role in evaluating the scientific and engineering studies to ascertain how the impacts to resources can be either avoided, minimized, or otherwise mitigated.

The Georgia DNR is committed to working with the Georgia Ports Authority to ensure that the full extent of project impacts are predictively modeled and understood with the best available scientific and engineering tools. It is only in this way that the Georgia EPD can make a balanced decision as to whether water quality and water resources in the lower Savannah River will continue to support efforts to recover the striped bass, provide drinking water, support other industries including tourism, as well as provide economically competitive port facilities to the market places on the world.

Striped Bass Fishery in the Lower Savannah River.

Tom Meronek, Georgia Department of Natural Resources, Fisheries Section, 22814 Hwy 144, Richmond Hill, GA 31324; tel: 912-727-2112.

The estimated annual survival of striped bass stocked in the Savannah River since 1990 is 35-45%. This survival rate has been enough to substantially increase the numbers of striped bass in the river. Annual electrofishing surveys have shown increased abundance. However, this increase in abundance has not given the expected increase in natural recruitment. The Georgia Department of Natural Resources continues to stock 40,000 six to eight inch striped bass in the Savannah River each year. These fish are marked by immersion of fry in oxytetracycline for eight hours. Forty otolith sets were obtained from age-2 striped bass in 1997 to determine if they contained OTC marks. Twenty-two (61%) of the fish were marked and 14 (39%) were not marked. When the error factor of 10% is added for lost or unreadable marks, the percentage of marked fish is about 70%. Therefore, natural recruitment of striped bass in the Savannah River accounted for about 30% of the population of age-2 fish residing in the river in 1997.

The most recent monitoring effort for striped bass was conducted in the lower Savannah River estuary from

January 21, 1998 to April 13, 1998. A total of 40.3 hours of electrofishing effort was expended to capture 114 striped bass. Catch per unit effort (CPUE) was 2.8 fish/ hour. The CPUE was less than the 1997 CPUE of 5.5 fish/ hour. The Savannah River does not yet contain a population of adult striped bass capable of sustaining the population at historic levels. Although, CPUE of striped bass greater than 9.0 kg was higher (0.22 fish/hr) than it has been since 1986 (0.18 fish/hr), and increased from 0.15 fish/hr in 1997. The CPUE of fish greater than 9.0 kg remains lower than the period from 1978 to 1981 when it averaged 1.01 fish/hr.